



UPDATE

A Publication of the 18th MEDCOM Preventive Services Directorate

"Preserving the Fighting Strength"

April 1 & May 2003 Edition Volume 2, Issue 5

Editor's Note

Welcome to the May and April 2003 issue of the 'DNBI Update.' This month we focus on the upcoming monsoon season, sun safety, sexually transmitted diseases, SARS and malaria. No better time exists to informally educate a patient than during the doctor patient encounter. As always, we welcome your feedback. Please address any comments or ideas for future issues to andrew.plummer@apg.amedd.army.mil

Monsoon Season: What you should know.

In the Pacific, the months of July and August are well known for tropical storms. Preparation for the typhoon season is critical particularly for newcomers to the peninsula. Last year alone one of the most powerful tropical storms in 47 years devastated the Korean peninsula. "*Typhoon Rage*" claimed some lives and left significant amounts of damage in its wake. With a high turnover rate of personnel on the Korean peninsula it is critical that we send a clear message to personnel and particularly healthcare personnel about the potential consequences of a tropical storm.

What is a typhoon?

First, let us understand what a typhoon is and how it impacts the landmass that it comes into contact with. A typhoon is a swirling, circling, funnel of wind with a low-pressure system at its center. By definition a typhoon is a hurricane with a Western Pacific twist. Interestingly enough depending on where a hurricane occurs it is known by different names. Most hurricanes originate within the doldrums, a narrow equatorial belt characterized by alternating periods of calm, light variable breezes, and frequent violent gusts of windy rainstorms.

As the doldrums of the Atlantic are situated largely to the north of the equator, hurricanes do not occur in the South Atlantic Ocean. The Pacific doldrums extend north and south of the equator; thus hurricanes often occur in the South and North Pacific oceans. Hurricanes consist of high-velocity winds blowing circularly around a low-pressure center, known as the eye of the storm. The low-pressure center develops when the warm, saturated air prevalent in the doldrums is under run and forced upward by denser, cooler air. Remember the adage heat rises. From the edge of the storm toward its center, the atmospheric pressure drops sharply and the wind velocity rises. This rise in wind velocity is what makes these storms as violent and dangerous. The winds attain maximum force close to the point of lowest pressure. The strength of a hurricane is rated from 1 to 5. The mildest, Category 1, has winds of at least 74 mph. The strongest (and rarest), Category 5, has winds that exceed 155 mph. Within the eye of the storm, which averages 24 km (15 mi) in diameter, the winds stop and the clouds lift, but the seas remain very active.

Is a typhoon much different than a hurricane?

A typhoon is a hurricane that happens to begin and end in the Western Pacific. In the Atlantic and Pacific (east of the international date line) storms with sustained winds of 74mph are called Hurricanes. In the Western Pacific these storms are called Typhoons. In the Indian Ocean and the Bay of Bengal they are called Cyclones and in Australia they are referred to as Willy Willys.

Why is it important to me as a healthcare provider?

A number of public health problems can arise during and after a tropical storm. They can be divided in two major categories. Mechanical or physical effects and infectious diseases.

Mechanical: Hurricane morbidity and mortality include drowning from the storm surge, trauma from collapsing structures or during the cleanup process.

Infectious Diseases: Due to the displacement of animals and insects as well

as residents, increases in animal bites, stings and mosquito vectors have been noted. Increased breeding sites in the form of fresh pools of standing water offer an ideal environment for mosquito to propagate. In addition rates of respiratory and gastrointestinal illness may rise in during severe storms.

What are the proposed mechanisms of increased rates of respiratory or gastrointestinal illnesses?

Disruption of water purification systems and sewage treatment plants may put the community at risk of infections from contaminated food and water. Natural disasters that destroy homes and shelters often result in the forced congregation of victims, increasing the transmission of respiratory illnesses. Surveillance at the level of the provider for water and vector borne diseases is essential in general but particularly during and following natural disasters on any scale.

References

1. NOAA(National Oceanic and Atmospheric Administration)
2. Navy Pacific Meteorology and Oceanography Center
3. Joint Typhoon Warning Center
4. International Red Cross
5. American Red Cross

Information

18 MC HQ/DCSOPS is engaged to make sure our subordinate units have severe weather SOPS established to safeguard people, equipment and facilities. Save this link on your desktop:

Joint Typhoon Warning Center Products

<http://www.npmoc.navy.mil/jtwc.html>
www.ncdc.noaa.gov
www.noaa.gov

Tips for the coming season

- 1) Be aware of the local weather forecasts
- 2) Tune in to American Forces Network
- 3) Tune into the Warrior Channel for Command guidance or recommendations
- 4) Seek high ground and cover
- 5) Avoid declared flood zones and stay alert

Side Note: Smoking Cessation

This summers season providers are encouraged to refer new patients to the smoking cessation courses provided by the Area Health Promotion Coordinator. These trained professionals offer support and teach coping mechanisms for quitting smoking—vital elements for patient success that a busy provider cannot always offer. They then coordinate prescriptions for patients interested in pharmacological assistance with smoking cessation.

Classes on a variety of additional topics can also be arranged, such as heat injury prevention, STD prevention, weight loss, to name just a few. Please call for more information.

AREA I: 730-3542

AREA III: 753-8355

AREA II: 736-8920

AREA IV: 764-5213

Sun Safety: Responsible Sun Exposure

Though it is a staggering 93 million miles away the sun showers the earth with essential sunlight fostering the growth of plants, warming the earth and even promoting the growth of our bones. Yet, as with many things in life, too much of a good thing can be bad for your health. Though some sun exposure is practically unavoidable, our time in the sun can be still be enjoyed safely if we take the appropriate precautions to minimize the harmful effects of exposure. Here are a few informative questions and answers regarding sun exposure from the Center for Disease Control and Prevention

Q: When do I need to protect myself from sun exposure?

A: Protection from sun exposure is important all year round, not just during the summer or at the beach. Any time the sun's ultraviolet (UV) rays are able to reach the earth, you need to protect yourself from excessive sun exposure. UV rays can cause skin damage during any season or temperature.

Remember: UV rays reach you on cloudy and hazy days, as well as on bright and sunny days. UV rays will also reflect off any surface like water, cement, sand, and snow.

Q: What exactly are "ultraviolet rays"?

A: Ultraviolet (UV) rays are a part of sunlight that is an invisible form of radiation. UV rays can penetrate and change the structure of skin cells.

There are three types of UV rays:

ultraviolet A (UVA), ultraviolet B (UVB), and ultraviolet C (UVC). UVA

is the most abundant source of solar radiation at the earth's surface and penetrates beyond the top layer of human skin. Scientists believe that UVA radiation can cause damage to connective tissue and increase a person's risk for developing skin cancer.

UVB rays are less abundant at the earth's surface than UVA because a significant portion of UVB rays is absorbed by the ozone layer. UVB rays penetrate less deeply into the skin than do UVA rays, but also can be damaging.

UVC radiation is extremely hazardous to skin, but it is completely absorbed by the stratospheric ozone layer and does not reach the surface of the earth.

Q: How can I protect myself from the sun's UV rays?

A: When possible, avoid outdoor activities during midday, when the sun's rays are strongest. This usually means the hours between 10 a.m. and 4 p.m. You can also wear protective clothing, such as a wide-brimmed hat, long-sleeved shirt, and long pants. For eye protection, wear wraparound sunglasses that provide 100 percent UV ray protection. And always wear a broad-spectrum (protection against both UVA and UVB rays) sunscreen and lipscreen with at least SPF 15.



Q: What can excessive exposure to UV rays do to my health?

A: UV exposure appears to be the most important environmental factor in the development of skin cancer and a primary factor in the development of lip cancer.

Q: What does a suntan indicate? Why does the skin tan when exposed to the sun?

A: The penetration of UV rays to the skin's inner layer results in the production of more melanin. That melanin eventually moves toward the outer layers of the skin and becomes visible as a tan. **A suntan is not an indicator of good health.** Some physicians consider the skin's tanning a

response to injury because it appears after the sun's UV rays have killed some cells and damaged others.

Q: Does it matter what kind of sunscreen I use?

A: Sunscreens come in a variety of forms such as lotions, gels, and sprays, so there are plenty of different options. There are also sunscreens made for specific purposes, such as the scalp, sensitive skin, and for use on babies. Regardless of the type of sunscreen you choose, be sure that you use one that blocks both UVA and UVB rays and that it offers at least SPF 15.

Q: What does a sunscreen's SPF rating mean?

A: Sunscreens are assigned a Sun Protection Factor (SPF) number according to their effectiveness in offering protection from UV rays. Higher numbers indicate more protection. As a rule of thumb, you should always use a sunscreen with at least SPF 15.

Q: Do sunscreens need to be reapplied during the course of a day?

A: You should follow the manufacturer's directions regarding reapplication or you risk not getting the protection that you might think you are getting. Though recently developed sunscreens are more resistant to loss through sweating and getting wet than previous sunscreens were, you should still reapply frequently, especially during peak sun hours or after swimming or sweating.

Q: How do sunscreens work?

A: Most sun protection products work by absorbing, reflecting, or scattering the sun's rays. Such products contain chemicals that interact with the skin to protect it from UV rays. Sunscreens help prevent problems related to sun

exposure, such as aging skin and precancerous growths. Keep in mind that sunscreen is not meant to allow you to spend more time in the sun than you would otherwise. That's why it is important to complement sunscreen use with other sun protection options: cover up, wear a hat and sunglasses, and seek shade.

Q: What kinds of clothing best protect my skin from UV rays?

A: Clothing that covers your skin protects against the sun's UV rays. Loose-fitting long-sleeved shirts and long pants made from tightly woven fabric offer the best protection. A wet t-shirt offers you much less UV protection than does a dry one. If wearing this type of clothing isn't practical, at least try to wear a t-shirt or a beach cover-up. Keep in mind, however, that a typical t-shirt actually has an SPF rating substantially lower than the recommended SPF 15, so double-up on protection by using sunscreen with at least SPF 15 (and UVA and UVB

protection) and staying in the shade when you can.

Q: Will a hat help protect my skin? Are there recommended styles for the best protection?

A: Hats can help shield your skin from the sun's UV rays. Choose a hat that provides shade for all of your head and neck. For the most protection, wear a hat with a brim all the way around that shades your face, ears, and the back of your neck.

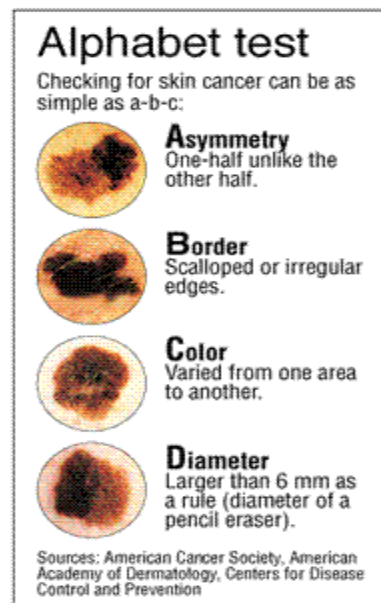
Q: Are sunglasses an important part of my sun protection plan?

A: Yes. Sunglasses protect your eyes from UV rays and reduce the risk of cataracts. They also protect the tender skin around your eyes from sun exposure. Sunglasses that block both UVA and UVB rays offer the best protection. The majority of sunglasses sold in the United States, regardless of cost, meet this standard. Wrap-around sunglasses work best because they block UV rays from sneaking in from the side.

References:

1. Center for Disease Control and Prevention
2. American Academy of Dermatology
3. American Cancer Society
4. National Cancer Society
5. National Institute of Occupational Safety and Health
6. US Army Center for Health Promotion and Preventive Medicine

Remember Your ABC's



DNBI UPDATE Staff**COL Terry Klein, Ph.D.**

Director, 18th MEDCOM Preventive Services

LTC Robert W. Pipkin

Chief, Environmental Health and Industrial Hygiene

LTC Lee, Hee-Choon, M.D., M.P.H

Chief, Clinical Preventive Services

MAJ Angelene Hemingway, R.N., CHN

Chief, 18th MEDCOM Community Health Nursing

CPT Andrew Plummer, M.D., M.P.HPreventive Medicine Officer
Editor, DNBI Update**MSG Wan Young Kim**NCOIC, 18th MEDCOM Preventive Services**Ms Suk Hui Yi MPH**

Epidemiologist

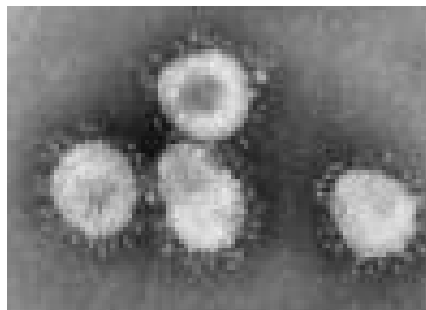
Helen Chang, M.D.

Chief, Occupational Health

Ms. Suh, OK

Health Promotion Educator

Views and opinions expressed are not necessarily those of the 18th MEDCOM or the Department of the Army.



has taken its place amongst some of the most deadly microbes in history.

Despite a downward trend in the number of new cases and deaths and the apparent success of public health interventions, many questions remain unanswered. Certainly one of these is the origin of this new disease and whether or not it will reappear if indeed there are not actual cases to speak of. There is speculation that it arose in animals and began when the virus “jumped” from animals to humans. This would potentially affect some of the preventive measures that could be implemented in the future.

With that in mind clinicians, healthcare providers and first responders must have a lower threshold for suspecting new possibly reemerging cases of SARS. This will be particularly important for the upcoming winter season when the common cold, influenza and other upper respiratory illnesses will compete to obscure the clinical picture and further complicate the differential diagnosis. In light of the fact that the epidemic was more likely to infect healthcare workers than any other group it is critical that suspect SARS cases be quickly recognized and managed appropriately not only for the health and safety of medical personnel but for the

SARS Update

As the SARS outbreak appears to be under control, it is important that healthcare providers remain vigilant and not forget the lessons learned from this unexpected outbreak. The second consecutive day of no new cases since the beginning of the outbreak has come to pass. At the time of the writing of this article SARS had infected 8349 people worldwide and had claimed the lives of 812 individuals. With a case fatality rate of nearly 10%, this respiratory illness

community at large. Here are a few suggestions for active surveillance on the part of clinicians on the front lines

1. Follow the news and information distributed about disease outbreaks that may affect service members or beneficiaries. Contact **Preventive Services(736-3025)** for more

information, since we are in contact with members of the Korean medical system. Sources of information will come in the forms of bulletins, updates and travel restrictions and advisories from Preventive Services through the 18th MEDCOM/USFK/US Eighth Army as during the SARS outbreak.

2. You, the astute clinician, are our first and best line of defense. You are the first to evaluate sick patients that might be the first case of an outbreak. Recognizing unusual cases or clusters of the similar clinical presentations is the cornerstone of active disease surveillance.

3. Take the time to most accurately code diseases in the ADS system and file communicable disease reports through RMES in a timely fashion so that similar cases separated by time and space may be epidemiologically linked. The presence of deploying troops in various locations and leisure travel on the part of service members and their families broadens the nature and magnitude of potential exposures to disease causing agents.

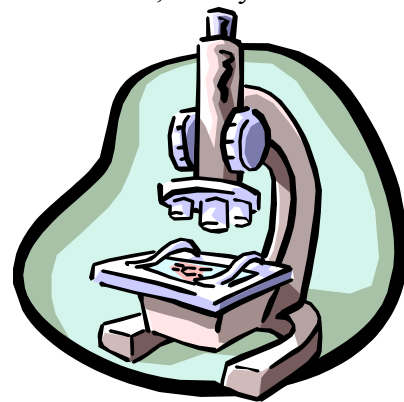
4. Look forward to clinical decision pathways that may be available before influenza season that may help distinguish SARS from other upper respiratory symptoms with nonspecific characteristics.

The success of the public health effort to halt the spread of SARS can be partially attributed to the unprecedented

cooperation of nations through information sharing efforts that allowed the SARS virus to be recognized, tracked and identified. At the local level operationally and medically, the establishment of travel advisories and restrictions, screening and isolation protocols were mainly responsible controlling the SARS outbreak.

The world community continues to work together in search of more accurate diagnostic tests that would allow for earlier diagnosis of the disease thus reducing the transmission of the disease. In addition although a number of antiviral medications have been utilized in the treatment of SARS none have proven to be consistently successful. Vaccine research on SARS is also ongoing since prevention would be the best solutions, but will require and better understanding of the virus and the potential for mutations which could alter the efficacy of a strain specific vaccine.

If SARS reemerges, the medical community will be and must be more prepared than ever before. We were successful here in South Korea and will continue to be "Fit, Ready and Reliable".



References:

World Health Organization:
Communicable Disease and Response(CSR)
Severe Acute Respiratory Syndrome(SARS)
Center for Disease Control and Prevention

**Community Health In Action:
Named Contact Types From
Sexually Transmitted Disease
Case Contact Interviews, CY 2002**

Sexually transmitted diseases (STDs), which are transmitted through sexual contact are epidemiologically important reportable diseases. STDs, once referred to as venereal diseases, are extremely common, but difficult to track. Although STDs are difficult to track, Army policies provide guidelines for tracking sexual contacts of active duty personnel diagnosed with STDs.

The Army STD Prevention and Control Program, [Army Regulation (AR) 40-5,] provides for accurate diagnosis of STDs. Once an STD is diagnosed, the infected person and their sexual partner(s), receive appropriate treatment in accordance with the Centers for Disease Control and Prevention's STD treatment guidelines. Community Health Nursing (CHN) personnel, attempt to interrupt the cycle of transmission by conducting interviews, epidemiological contact investigations and follow-up. CHNs conduct active surveillance at the installation level with case reporting to the civilian health department and the U.S. Army Medical Surveillance Activity. Additionally, they provide health education directed at all sectors of the military community (including mandatory annual and pre-deployment education).

During CY2002, contact case interviews (CCI)** were conducted on 850 individuals in Areas I – IV, Republic of Korea (ROK) who tested positive for an STD (see attached). While STDs among US soldiers appears

to have increased in absolute numbers over the past year, the increase is largely due to better reporting and case follow-up. An analysis and assessment of CCI data indicates that 62% (521) of STDs were transmitted soldier-to-soldier, 14% (119) between soldiers and US civilians, 13% (113) between soldiers and foreign civilians, 7% (61) between soldiers and workers in local clubs and 3% (29) did not remember. (See Table 1).

In a far forward and highly operational environment such as ROK there are a number of obstacles to initiating and completing CCI's. Soldiers are not always available to conduct CCI. The frequency of soldier turnover, field deployments and command support all impact the success of conducting CCI in the ROK. Thus, command emphasis and support are essential parts of a successful program to reduce STD risk and interrupt the transmission cycle.

Table 1. Percent of Contact Type

Category	Percent
Soldier to Soldier	62%
Soldier to US Civilian	14%
Soldier to Foreign civilian	13%
Soldiers and Club workers	7%
Do Not Recall	3%

MAJ Angie Hemingway
Consultant/Chief, Community Health
Nurse/Health Promotion
18th MEDCOM
Seoul, Korea

*Foreign is anyone other than an American.

**Club contacts are anyone met in a club.

*** CCI signifies contact case interview

**Named Contact Types From Sexually Transmitted Disease Case Contact Interviews, CY
2002**

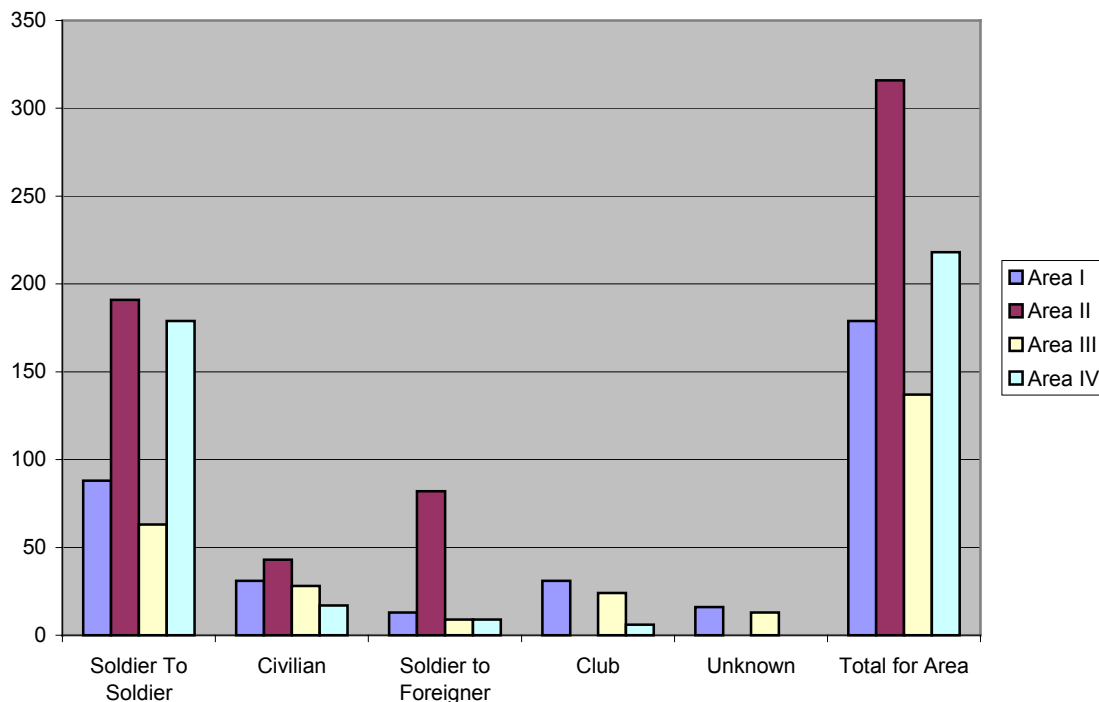


Figure 1. Named Contact Types from Named Contact during STD interviews

Clinical Corner

Malaria Review

Organism	Fevers	Liver Form	Terminal Treatment	Prognosis	In Korea
<i>Plasmodium falciparum</i>	24-48hrs	No	No	Guarded	No
<i>Plasmodium malaria</i>	72 hrs	No	No	Excellent	No
<i>Plasmodium vivax</i> *	48-72 hrs	Yes	Yes	Excellent	Yes
<i>Plasmodium ovale</i> *	48-72hrs	Yes	Yes	Excellent	No

*Relapsing forms that require terminal treatment with primaquine for 4 weeks following travel to endemic area since liver forms may lie dormant in the liver and require eradication for a complete cure.

There are four species of malaria. It is important to understand that the malaria present in the Republic of Korea is caused by *Plasmodium vivax*. This species causes a febrile illness characterized by high fevers, shaking chills, myalgia, headache and often diarrhea. While impressive, this form is **rarely fatal**. Approximately 10% of patients may experience recurrent disease that is usually cured by a second course of chloroquine and primaquin.

While a problem in other areas, **chloroquine resistance is not seen here.**

Korean vivax malaria is somewhat unique in its incubation period. Approximately 50% of patients will develop disease within 2-3 weeks of a bite by an infected mosquito. The remainder, however, demonstrate a **much longer incubation** period—as long as 5-9 months after infection, or in some extreme instances, as long as 12-18 months after infection.



DISEASE TRENDS

18th MEDCOM Reportable Events Program

Selected Reportable Events Incidence Summary April & May 2003

Reportable Condition	<i>Area I</i>		<i>Area II</i>		<i>Area III</i>		<i>Area IV</i>		<i>Totals</i>	
	April	May	April	May	April	May	April	May	April	May
Trichomonas	1	0	0	1	1	0	1	0	3	1
Chlamydia	26	12	18	7	17	6	8	4	69	29
Herpes simplex	1	2	0	0	1	0	0	0	2	2
Gonorrhea	3	1	5	1	1	1	1	1	10	4
Syphilis	0	0	0	0	0	0	0	2	0	2
HIV	0	0	0	0	0	0	0	0	0	0
STD Totals	31	15	23	9	20	7	10	7	84	38
Tuberculosis (active disease)										
Tuberculosis (recent converter)	1	7	20	1	4	15	4	0	29	23
Heat Injury	0	0	1	0	0	0	0	0	1	0

NR=None Reported

